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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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THE ANNUAL REPORT AND THE GENERAL MEETING.

The Annual Report is now issued, and contains nothing to encourage hopes of a good attendance at the Annual General Meeting. It is a plain record of a not very eventful year's work; and few of its items are likely to stimulate discussion. The financial position may be summarised in a sentence: it is satisfactory at present, but it can only remain so by voluntary subscriptions. The shortage of veterinary surgeons for the Army is reported upon at some length; but it is not easy to see how any discussion of it can be profitable. Perhaps the likeliest section to repay discussion is that relating to the motor and petrol duties; for it is probable that some members do not even yet appreciate all their privileges in these matters.

It can hardly be expected that many country members should attend the Annual Meeting this year; and we can only hope that London members will attend better than usual. There are always members enough in London to make a record Annual Meeting; but they are much more slack in attending than the countrymen. Often the Londoners present, exclusive of Councilmen, can almost be counted upon the fingers of one hand; and the fact that several of them practically always attend only makes the remissness of the rest more noticeable. The poor attendances at the Annual Meeting have been a reproach to the profession for decades; and London members are largely to blame for it.

LOCAL PREVALENCE OF DISEASES.

Is canine interdigital cyst really commoner in seaside districts than inland? Many members say that it is; but the opinion is not generally held. We know also that many men consider "moist eczema" of the dog to be more prevalent on the coast than inland; but here again the opinion would probably not be general. Both points might well be followed up, though it will not be easy to reach a correct solution of either. When a condition is common everywhere—as both these, especially the latter, admittedly are—it is obvious that any attempt to estimate its comparative incidence is fraught with many possibilities of error. Still, if either or both of these questions could be definitely answered it might bring us a little further forward as regards etiology; and that is so obscure in both conditions that the attempt is worth making.

There are many conditions the pathology of which might be elucidated by enquiry into their incidence, but that enquiry would have to be very careful; for there are few subjects more difficult to estimate than the incidence of unscheduled diseases.

MILK FEVER (?) IN A GOAT.

A few days ago I was called to a goat, said to have "injured its neck."

The subject, a heavy milking Toggenburg-Anglo-Nubian goat, 4 years and 7 months old, producing well over three quarts daily.

I found her quite insensible, unable to stand or even hold up her head. Eye very glassy, nose and ears cold and clammy. Temperature normal. There was a slightly blood-tinged diarrhœa. History being that she was quite alright the previous night, and was found down with head hanging loosely round at the side. She had kidded down with third kid 29 days previously.

Being rather keen to try treatment (in spite of owner's remark that she was "as near dead as dam' it") I went back to my surgery, fitted a small syphon to my milk fever pump, returned, and injected the udder; gave a hypodermic injection of strychnine, and left instructions for owner to keep her well banked up and to keep fomenting the poll with cold water.

I was very busy and so unable to return till evening, when I was very surprised to find her up and feeding as though nothing had happened. I gathered from owner that she showed slight improvement in little over an hour, in two hours time she was able to hold up her head and look round, while in three to four hours she was up and had full control of her movements. She has now quite recovered and is as well as ever.

I am rather curious to know what really was wrong with that goat. I gather from Mr. Wallis Hoare's fine volume on Veterinary Medicine that she could have had either of the following:—

(i) The ordinary Milk fever or Parturient paresis.

(ii) Deferred Milk fever or Parturient indigestion: the so-called "chronic gastro-intestinal catarrh after calving."

(iii) Lumbar paralysis or paralysis after parturition.

Personally, I rather favour the second one, but the rapid onset and equally rapid recovery, and the positive assurance of owner that she showed no other symptoms the day previous, are rather against it.

Horsham. SAM SMITH, M.R.C.V.S.

ABSTRACTS FROM FOREIGN JOURNALS.

Sand Colic.

P Michel, having seen a good number of cases of colic due to the ingestion of sand, has published, in *Le Recueil de Médecine Vétérinaire*, the results of his observations, arranged as follows:—

Symptomatology, evolution, and termination. The affected animals, (sometimes after having refused to eat or drink) present a short period of restlessness. This is soon followed by marked agitation. The horse lies on his back, rolls, assumes abnormal positions, throws himself violently down and rises again, paws the ground, makes more or less ineffectual attempts to urinate, and evacuates some small balls of dry fæces mixed with sand in variable proportions, or else noisily expels very soft excrements accompanied by malodorous gases. Phases of calm follow this agitation; the horse looks at his flanks, right and left, lies carefully down upon the sensitive side, and remains thus inert, with the respiration short and rapid, the nostrils dilated, the face anxious, and the conjunctiva more or less injected. Walking, or any external excitation may provoke a new paroxysm.

If the case is not interfered with the period of tranquillity lasts some hours, interrupted by phases of agitation, and generally terminates in recovery, at least to all appearance. In some cases, fortunately rare, death supervenes suddenly; and post-mortem examination frequently reveals rupture of the stomach or colon, hernia, etc. Often, after the animal appears cured, a new but less severe attack appears in eight or ten days.

Pathological anatomy. Post-mortem examination, systematically practised upon all the animals that died, showed the constant existence of sand, generally in unsuspected abundance, in the digestive reservoirs. The sand was accumulated in all the dependent parts of the cæcum and of the large colon. On an average from five to ten kilogrammes was found; but in one case Michel encountered as much as 45 kilogrammes. In such quantities the sand provokes obstructions and invaginations with all their consecutive phenomena (congestions, hæmorrhages, strangulations, ruptures, etc.), more or less extensive paralysis, of the intestine, and various hernias of this organ.

Etiology and pathogeny. Michel thinks that the chief factor in causing the ingestion of sand in sufficient quantities to produce colic is the drinking water. Strong winds, which blow the sand into the places for eating and drinking, are another factor; and the irregularity in work and feeding which occurs in war are a third.

Diagnosis and prognosis. Diagnosis is easy from the symptoms cited. In case of doubt, an examination of the fæces always reveals sand. Prognosis is usually benign; and the animal recovers rapidly. The mortality is small, and is nearly always due to complications, such as rupture of the stomach, intestinal hæmorrhages, diaphragmatic hernias, etc.

Treatment. This should be, above all, preventive. It includes all the measures of general hygiene, along with special care to ensure that the drinking water should be as pure as possible, and to exclude all opportunities for the ingestion of sand. With the latter object, the stables, etc., should be sheltered from winds.

Curative treatment is very simple. An expectant treatment should be adopted. As soon as the disease appears, the horse should be placed in a spacious stall where he cannot injure himself, prevented from all inopportune movement and all agitation, and given a sedative draught containing tincture of opium. In most cases a rapid improvement supervenes, and in twelve hours the horse may be considered cured. The elimination of the sand is then commenced by means of small doses of pilocarpine; and a laxative *régime* is adopted, which enables the horse to return to work and to his ordinary food after the lapse of forty-eight hours. Sometimes the symptoms indicate other therapeutic measures, such as puncture of the intestines, bleeding, cutaneous revulsion, clysters, etc. Purgatives are always useless and sometimes prejudicial.—(*Revista de Hygiene y Sanidad Pecuarias*).

Three-chambered Heart in a Dog.

Prof. G. Moussu, in *La Recueil de Médecine Vétérinaire*, records this most unusual case. The subject was a dog with no history of illness, which had lived with his owners for seven years, and was destroyed on account of indocility.

Post-mortem examination was begun without any expectation of abnormalities. The first thing which attracted attention was the abnormality in the external surface of the heart. The anterior aspect showed, about the median region, equidistant from the apex and the base, a deep depression, which might at first sight, have been taken for a lesion of the myocardium. This was not the case; the explanation of the abnormality was found in the comparative examination of the two ventricles. The two auricles were normal in position and development; but it was impossible to establish a distinction between the right ventricle and the left one. Only one arterial trunk issued from the base of the heart; and no pulmonary artery existed. The heart appeared to have neither a right ventricle nor a pulmonary artery.

The aorta presented a normal disposition, except in the region corresponding to the bifurcation of the trachea, where there emerged from its right upper border, a large and varicose collateral of variable diameter, which terminated in the hilum of the lung.

Careful examination of the heart, while it demonstrated the existence of a rudimentary right ventricle, revealed other abnormalities of development. The two auricles communicated by the foramen ovale, but were normal in all other respects. In the ventricular mass, the abnormalities of development were very curious. The left ventricle was normally formed; but the right one, although the walls were thick, was rudimentary, and the cavity

would scarcely have contained a hazel nut. The communication of this ventricle with the right auricle was imperfect; for there was no true auriculo-ventricular orifice, no tricuspid valves, and no pulmonary artery. There existed, therefore, from a physiological point of view, only a simple collateral of the aorta, two auricles, and one ventricle. The heart was a true amphibian heart; and the circulatory mechanism was wholly comparable to that of the batrachians.

How was this animal able to live for so many years with so imperfect a circulatory organization? All that Moussu can say upon this point is that the owner stated that the dog could not undergo the least fatigue without breathlessness. Moussu regards the abnormalities of the circulatory apparatus as being due to defective differentiation in the first stages of embryonic life, leading to non-development of the pulmonary artery. The inter-ventricular development was well produced; but the right ventricle reduced to permanent inaction by the absence of the pulmonary artery, atrophied, or perhaps was scarcely developed. The auriculo-ventricular orifice remained in a rudimentary condition; and the valve did not appear.—(*Revista de Higiene y Sanidad Veterinaria*).

W. R. C.

THE CENTRAL VETERINARY SOCIETY.

[National V.M.A. Southern Branch.]

An Ordinary Meeting was held at 10 Red Lion Square, London, W.C., on Thursday, May 3rd, N. Almond, Esq., President, in the chair.

The following Fellows signed the attendance book:—Profs. J. Macqueen, G. H. Wooldridge; Messrs. F. W. Chamberlain, W. R. Clarke, W. R. Davis, A. E. Gostling, Henry Gray, H. King, W. S. King, J. W. McIntosh, W. Perryman, F. G. Samson, W. N. Thompson, J. Willett, and Hugh A. MacCormack, Hon. Sec.

Visitors: Messrs. C. S. Conde and L. P. Pugh.

Minutes. On the proposition of Mr. Samson, seconded by Mr. J. Willett, the minutes of the previous meeting were taken as read, and confirmed.

Correspondence. Letters regretting inability to be present were received from Major W. S. Mulvey and Mr. W. F. Willett.

A letter was also read from Mr. Kelland, Joint Sec. of the Victoria Veterinary Benevolent Fund, asking for a subscription. On the proposition of Mr. J. Willett, seconded by Mr. Gostling, it was agreed to recommend to the Council that the usual subscription should be given, provided the funds would permit.

The Hon. Sec. reported that he had received Bulletin 64 of the Agricultural Research Institute, Pusa, containing a paper, "On the Preparation of an Anti-serum or Rinderpest," by Mr. A. W. Shilston. It was agreed to write thanking the Secretary of the Institute for the presentation.

Specimens.

Mr. H. Gray exhibited three calculi taken from a bitch, a cross-bred Aberdeen terrier, upon which he operated on May 1st—the same animal from which he had removed seven calculi on May 23rd, 1916. About two months after the first operation she began to show symptoms of their presence again. There was no doubt that the bladder was emptied on the first occasion.

Mr. J. Willett said his experience was that such animals had far too much flesh food. Sometimes when passing urine only a small drop was passed, which seemed to burn, but the trouble ceased when an alkaline mixture was given. A change of diet might be beneficial to an animal which had a tendency to form calculi.

Prof. Wooldridge said that in some cases there was a thickening of scar tissue after the first operation which might possibly be taken for calculi, and he should like to know whether Mr. Gray was quite certain that he could feel the calculi two months after the first operation. Also, were any lithotriptics used in treatment subsequently. He had no faith in their efficacy, and if they were administered in Mr. Gray's case it would be an indication that they had no beneficial result.

Mr. Gray said he put the dog on a milk and vegetable diet for some time, without any apparent benefit. His experience was that when there was a frequent desire to pass water there was some irritation, probably due to calculi. There was no doubt about the calculi two months later, as he could feel them grating on one another. Lithotriptics were given in the form of lithium citrate and other things, but did no good. He did not think there was such a thing as a lithotriptic. The animal had been on a milk and vegetable diet all along, and had been under treatment for a year before the second operation. A purely meat diet did not seem seem favourable to the formation of calculi.

Prof. Wooldridge exhibited a hermaphrodite dog of very valuable strain of Sealyham. A medical man, a friend of the owner, who saw the dog, examined the vulva, and on feeling a firm body expressed the opinion that it was something the dog had swallowed, possibly a skewer. With a lancet he made a small incision and endeavoured to pass the skewer or whatever it was, but was unable to do so and did not proceed further. On the animal being sent to him (Prof. Wooldridge) he found what was supposed to be a foreign body was really a rudimentary os penis. It protruded a considerable distance from the vulva and was rather unsightly. The urethra, he thought, was above the penis. It was open to the suggestion, without dissection, that it was only an abnormal clitoris with a bone in it, but that was a still rarer condition. He could find no other external genitals. There was no distinct œstrum although the animal was old enough for it. It was of a beautiful disposition and it was almost a pity to destroy it.

Mr. H. Gray asked if there was such a thing as hermaphroditism in domesticated animals. He believed, from the zoological point of view, it was only found in insects.

Prof. Wooldridge said that was a verbal quibble. The object of language was to convey meanings from one person to another, and what was described popularly and also professionally as hermaphroditism did exist. Bisexualism probably has not been met with in domesticated animals, but some of the characteristics of the two sexes, as indicated in the genital organs of a domesticated animal undoubtedly did exist, and not infrequently.

Mr. Willett said he did not consider the condition unsightly and it would be a great pity to destroy the animal.

Prof. Wooldridge intimated that if he did decide to dissect it he would report the case to the Society again.

Mr. H. King showed a dew-claw from a sheep dog. He thought it might be a keratoma and dissected it. The dog was three or four years old, and was quite well.

Mr. Willett said it was very much like a seedy toe in the horse.

"Some Surgical Conditions encountered in Canine Practice." By Henry Gray, M.R.C.V.S. Resumed Discussion.

Mr. W. R. Davis, speaking on the subject of interdigital abscesses, said Mr. Gray definitely stated that the condition never arose from eczema, and that it began in the areolar tissue, and that in many cases it was very similar to the condition found around the anus of the dog, pus formation in the anal glands, which he said were nothing but enlarged sebaceous follicles. He himself did not think that sebaceous follicles occurred in the areolar tissue, so that if the condition arose from inflammation of the sebaceous glands it arose in the skin itself. His own impression was that the condition arose from catarrh of the fine skin between the toes spreading later to areolar tissue. He had repeatedly seen a sort of erythema or eczema with oozing of fluid in the skin between the toes previous to the formation, or accompanying the formation of cysts between the digits. Curiously enough, he had picked up an old book at a bookstall—Mracek's Atlas of (human) Skin diseases—and in describing Hyperidrosis (pathologically increased sweat secretion) sweaty feet, in human beings, the author said that the condition often led to the formation of blisters on the lower surface of the feet and between the toes, and that quite frequently cracks developed and pus secretion followed. Mr. Chamberlain had said that he had often observed that dogs which were the subject of interdigital abscesses had sweaty feet. Interdigital abscesses were the most intractable things; he had always considered them as being an inflammatory condition in the areolar tissue, but he believed the origin was first of all in the papillary layer of the skin, as a catarrh. He agreed with Mr. Gray's treatment—removal of a piece of skin over the surface of the abscess and emptying the pocket; but he always found the best thing afterwards was the insertion into the cavity of a bit of gauze soaked in strong carbolic oil, 1 in 8. He always gave some oily preparation to be applied once a week between the toes, so as to combat any disposition to eczema. The old book he had picked up recommended for sweaty feet that the feet should be daily anointed with unguentum diacoli, which was very much the same as the emplastrum plumbi recommended by Mr. Gray, except that there was not so much resin in it. Eczema of the scrotum he had always found to be a most difficult condition to treat in some dogs, especially large dogs. In one case he had it was so aggravated that it developed into orchitis and the dog died. The best treatment, he believed, was the application of oily dressings, either carbolic oil or oil with Jeyes' fluid.

Mr. Chamberlain said he had never been clear in his mind as to the cause of hæmorrhagic cystitis in the cat, which is a common condition. Frequently cats were brought in in considerable pain, and on the abdomen being palpated there was often found a largely distended bladder, which could be emptied in some cases by pressure of the hand, but in other cases could not. That gave rise to a suspicion that there might be a small piece of calculus in the urethra. It was impossible to pass a catheter, and as a last resource the animal was submitted to supra-pubic puncture, and in the ordinary course of events death was the next thing. In the present state of knowledge it was impossible to use a catheter. He would like to know whether Mr. Gray had found many calculi in cats. He himself had made post-mortems on several animals which had died in that way, but had not found calculi, though he had found inflammation of the bladder and perhaps a certain amount of peritonitis. He had not much success with lithotomy, although he had operated on a good many dogs as carefully as possible. He would like to hear from Mr. Gray the approximate proportion of the animals that survived operation when the calculi shown were extracted.

Perineal hernia. There was a condition in the dog that he did not think could be correctly brought under that heading, although at first sight it was very much like it, and that was a case in which there was a bulging just at the side of the middle line of the rectum. The dog had great difficulty in defæcating, and in many cases it was necessary to press back the bulging part before the animal could extrude the fæces. It was a case of ruptured rectum. Hernia was a descent of bowel or omentum through an opening, but there was no question of bowel or omentum in those cases, but simply fæces. If surgical measures were adopted with the view to stitching the rectum, the dog, in his experience, died. One of the most important things to attend to in operating on a dog for scrotal hernia was very thoroughly to dissect the hernia sac from surrounding fascia. With regard to the very vexed question of interdigital abscess or cyst, Mr. Gray was a little dogmatic in saying that it was erroneous to call them cysts. He thought many of the cases were of the nature of a retention cyst in the first place. He knew that a cyst did not contain pus in the ordinary way, nor did a hæmatoma, but a suppurating hæmatoma was a very common condition. He had said at the last meeting that he thought that many cases of interdigital abscess began with catarrhal dermatitis. Mr. Gray said it was absolutely erroneous to say that interdigital eczema had anything to do with interdigital cyst. The line of demarcation between catarrhal dermatitis and eczema of the pad was rather an arbitrary one. In the case of catarrhal dermatitis the tar paving or similar irritant was the visible cause, but it seemed to him that eczema was essentially a catarrhal dermatitis without any visible irritant. It had been suggested it was rather a paradox to discuss vaccine treatment after putting the condition down to an irritant, but he thought it began with inflammation and that there was subsequent infection.

Mr. J. Willett said that in Mr. Gray's operative surgery there was very little to criticise, and he would confine himself to interdigital cysts. He was inclined to agree with Mr. Davis and Mr. Chamberlain that the demarcation between eczema and erythema of the foot and interdigital cyst was practically non-existent, that one was only an aggravation of the other. When an interdigital cyst was forming the irritation to the animal was very acute, and it was constantly licking the cyst. In an ordinary abscess forming there was no irritation. In treatment he quite agreed cutting, with scissors in preference to a knife, an elliptical piece out of the abscess, but in the use of caustic he confined himself to a strong chloride of zinc and binding the part up with some emollient antiseptic ointment or powder, and he found they healed very quickly. He understood that interdigital cysts were much more prevalent in seaside places than in inland towns. He agreed with Mr. Chamberlain that an autogenous vaccine derived from a cyst would certainly be beneficial in preventing a recurrence. Autogenous serum was now becoming very fashionable. His son had recently been suffering from contagious ophthalmia acquired at school, and acne, and the doctor took a swab from the eye and had an autogenous serum made and injected it about four times, and the acne disappeared without any other treatment, and the ophthalmia had abated.

Prof. Macqueen said, with regard to the formation of calculi, he would like to know from Mr. Gray whether he had any good reason for supposing that calculi were always, or even very frequently formed in the renal pelvis; and at the same time if he thought calculi were frequently formed in the bladder, or more frequently there than in any other part of the urinary tract. Mr. Gray said that: "After operation no solid or fluid is

given for 24 hours, and at the end of that period about a tablespoonful of milk containing lithium citrate or sodium bicarbonate is allowed every four hours," and he said that lithium citrate should be given either in milk, water or food. He could understand the usefulness of bicarbonate of soda, but he did not understand the usefulness of lithium citrate, and therefore he would like Mr. Gray to explain what object he had in view in administering lithium citrate for any urinary infection. With regard to inguinal hernia he was in doubt as to why Mr. Gray removed a portion of the tunica vaginalis. In describing the operation Mr. Gray said: "When this has been accomplished a fairly large piece or fold of the tunic is clipped off with a sharp pair of scissors close up to the inferior half of the ring." The point that caused him to doubt the efficacy of that manœuvre was the one he desired to have explained. What did Mr. Gray expect to gain by excising a piece of the tunica vaginalis, especially when by excising it he exposed the passage which communicated with the peritoneal cavity. The operation was intended simply to close or partially close the external inguinal opening without pressing too much on the vas deferens and the other constituents of the cord, and yet Mr. Gray excised a piece of the tunica and exposed the patient to unnecessary risk thereby. The reference in the paper to pressure sutures seemed too academic to merit any further attention. With regard to interdigital abscesses, he would like first of all to express his view concerning the nature of the things which might be called interdigital abscesses or cysts. There had been a tendency in the profession for many years to try and connect up maladies in the lower animals with similar diseases in the human subject, and the veterinary surgeon who was able, by a little ingenuity and patience, to see the likeness, more or less approximate or absolute, of some affection in the horse or dog to some disease that was perhaps badly understood in man, seemed to think he had achieved a great success. It was an unfortunate attitude of mind and had been to some extent the cause of the delay of progress in veterinary science. It was most unfortunate that there should be an inclination to search human medical literature for the purpose of seeing some sort of identity between a certain defect in the lower animals and anything corresponding to it in the human subject. He would like to ask those gentlemen who had given so many years' time and attention to the diseases of the smaller animals, and who distinguished themselves so frequently as "canine experts," why they had so much neglected the study of the nature of such a malady as the so-called interdigital cyst. It seemed to him they had not been showing any alarming anxiety to make the discovery which appeared to be so necessary when the question was discussed. Text-books in general were not very helpful. Even if one wanted to know the structure of the skin of the fold between the digits of the dog, one was not able to ascertain it from any text-book. Therefore, although one might hazard an opinion that an interdigital cyst began as a retention cyst, there was no absolute knowledge at the present moment as to whether there was such a thing as a gland in that particular part of the skin. Therefore those who maintained that the abscess began as an inflammation of areolar tissue could not be contradicted or directed into the right path. He agreed with those who thought that cases of interdigital abscess or cyst began as an inflammation of the skin, a dermatitis, set up, no doubt, in a variety of ways. The next change was the formation of a small hæmatoma—there was extravasation of blood into the areolar tissue, and that might be derived from the capillary layer of the skin. That was one of the earliest stages of the condition. Sometimes, but not always, infection took place and the swelling suppurated. Sometimes it broke of its own accord, and sometimes had to be opened. He did not pretend to know what caused interdigital abscess or cyst, but he was almost bound to accept the statement that such things were produced by an injury of some kind, and he could support Mr. Willett's statement—that dogs at the seaside suffered more frequently than dogs in town, and after the summer holidays, in pre-war days, it was quite common to find dogs returning from the seaside affected with those cysts. The treatment should be local, and he did not know that there was much ground for supposing there was very much advantage in one method over another, provided the treatment was applied with the knowledge that the condition was similar to a hæmatoma or an abscess elsewhere. He believed Mr. Willett, when he had lived a little longer, would have less faith in vaccines than he had now, and especially autogenous vaccination, which apparently was not the surprising success that some persons imagined. With regard to hernia, he would like to know how Mr. Gray distinguished between inguinal and femoral hernia. In the bitch there was no proper inguinal canal, but in the dog there was an inguinal canal which had a lining of peritoneum. Did Mr. Gray agree that there was such a thing as femoral hernia, hernia occurring not in the usual situation of the inguinal canal but behind its posterior wall or Poupart's ligament, or through the femoral space? With regard to the treatment of eczema of the scrotum, he almost agreed with what Mr. Gray said, but he did not agree with those speakers who were in favour of oily or greasy dressings. Any oily material for eczema, especially for scrotal eczema, was the worst thing that could be applied. An astringent might not be very much better in certain cases, but a desiccant, or any agent that had a drying action, was the best application, and kaolin mixed with water was very good. He objected to the title "eczema of the scrotum," because he did not think the condition was eczema at all. Eczema apparently was a catarrhal inflammation of the skin, and no doubt so-called scrotal eczema was an inflammation of the skin. The only advantage he could see in treating the affection by oily dressings was to prolong the treatment—which might be satisfactory in certain cases! With regard to the treatment of chest effusions, Mr. Gray said that he had often failed to withdraw such effusions or exudations by the usual classical means, and he had had recourse to opening the pleural and peritoneal cavities and had had great success with that method. Then he became more cautious and said: "Nevertheless, I do not mean by 'great success' that I have always had ultimate recovery of the animal." Even if he had anything like a fair measure of success, the information was bound to be useful to the practitioner. His method of operating was more interesting than the need for it. Constant drainage took place from the wound which Mr. Gray had made between the ribs, and he did not apply a protective bandage because he thought there was no necessity for it. If fluid could come out, air could get in. To open a dog's chest by making a slit between the ribs and leaving the wound entirely unprotected, and trusting to a protecting stream of exudate passing through was going a little bit too far. The danger of all such openings was infection of the pleura. It might be said that infection had already taken place and that further infection could not alter the case. Then he would fall back immediately upon the almost constant result in such cases, the speedy death of the patient. Why did Mr. Gray prefer an incision through the abdominal wall measuring ½ in. to ¾ in., and yet, when opening the chest cavity, make an incision of 1½ in. or even 2 in.? It might be that a larger incision through the abdominal wall would facilitate prolapse, but he himself would be more inclined to make the larger incision through the abdominal wall. The paper con-

tained a great deal of useful information. Although one could ask questions generally about most papers, it did not follow that the paper was not entirely satisfactory, and he certainly felt very much obliged to Mr. Gray going over the ground he had covered. Although one might not see eye to eye with him in regard to everything, his contribution was distinctly useful, and those who paid attention to papers would be found to derive a great deal of benefit by taking the trouble to read carefully Mr. Gray's essay.

REPLY.

Mr. GRAY said the contribution was the outcome of 32 years' personal experience. The President had said that he thought the condition of hernia in the dog was femoral, but he did not know on what grounds the President came to that conclusion, because, according to his own experience from dissection, femoral was one of the rarest forms of hernia in the dog. Nearly all the hernias in the dog, with the exception of traumatic ones, took place through the weakest spots in the body. Nearly all hernias were due to congenital weakness. As to the urine getting into a wound, he did not think it was desirable it should, as it would act as an irritant, and if it got into the peritoneal cavity there would be the risk of peritonitis. With regard to Mr. Chamberlain's use of greasy preparations in the treatment of eczema of the scrotum, he (Mr. Gray) tried everything, and had found the use of greasy preparations on the scrotum more likely to entice the animal to lick the part. Mr. Chamberlain thought interdigital abscesses were due to catarrhal dermatitis. Catarrhal dermatitis started on the surface of the skin, and he would challenge anyone to prove that eczema was the same as an interdigital abscess. If the disease was studied from the beginning it would be found to start as a hard nodule below the skin, just as in strangles there was a hard nodule before suppuration. Eczema was a disease of the surface of the skin and rarely went below the deeper layers of the skin, whereas the cyst started from within outwards. In calling it a "cyst" the definition of a cyst had to be understood as a collection of fluid or secretion in some natural space or cavity not arising from inflammation. If it started as a sebaceous cyst a nodule might be expected. Sebaceous cysts in the dog never started as inflammation, although there might occasionally be inflammation after they were formed. When a sebaceous cyst was pricked a fatty material came out, very much like dripping. He agreed with Mr. MacCormack that the disease was in existence long before the use of tar on the roads. Tar was put on the roads when the motor car was introduced and at that time the horse began to be displaced, and therefore the veterinary surgeon who used to attend to horses had to turn his attention to dogs, and in consequence began to take more notice of disease in dogs, not because the disease did not exist before but because before the dog patient was a negligible quantity. When he was a pupil a great many veterinary surgeons looked upon the bringing a dog to them as more or less an insult. He agreed with what Mr. MacCormack had said, and advised him to try the lead lotion weak. Professor Wooldridge had taken him to task with regard to suturing the bladder. He had operated in many of the cases and had never had a fatality from leakage of the bladder, and he should continue to do as he had always done. As to being bad surgery, that was a matter of experience. With regard to the treatment of perineal hernia containing the bladder, the majority of cases he had seen in the dog had not caused any trouble whatever, and when they were old dogs he had advised no treatment, so as to keep the patient alive as long as possible. As to the differential diagnosis of calculi from tumour, he did not think there could be any difficulty if proper precautions were taken. Even without the use of a catheter it was possible to tell a tumour from a calculus; the calculus was firm and hard but a tumour yielded to a certain extent, and as a rule there was not much hæmorrhage from the bladder with calculi, unless it arose from long retention of urine. He could not agree with Professor Wooldridge that an interdigital abscess was due to tar, because if it were one would think that by removing the cause the effect would cease, but he saw the disease in dogs that had never been allowed to walk on the road, and it was as common in the west end of London as in any part of the Kingdom. With regard to opening the chest, he would ask Professor Wooldridge to try it. The majority of his patients were looked upon more as children than animals, and the owners would often give any amount to save them. With regard to Mr. Perryman's question as to the use of a catheter with the cat, nothing was easier if the right catheter, like the one shown, was used and used properly. The cause of hæmorrhagic cystitis, of which Mr. Perryman spoke, was the retention of urine following a plugging of the bony channel of the urethra with sabulous material, which sometimes the animal could eject spontaneously. He had heard it said that the bladder would rupture from retention of urine, but he had seen some hundreds of cases in cats and dogs where there had been a retention of urine for several days, and he had never yet seen rupture of the bladder; in fact, after some time the bladder seemed to be less in calibre. When there was inflammation of the bladder there was after a time absorption of urine into the system. It was possible to inject large lethal doses of strychnine into the healthy bladder and not produce any symptoms of poisoning, which showed how impervious the bladder was. If injected into an inflamed bladder there would be absorption. Mr. Davis had tried to compare interdigital abscesses with blisters in man. Blisters in man were due to the raising of the epithelial layer by an outpouring of serum, and that was a different matter altogether. Interdigital abscesses started from under the skin, not between the superficial layers. With regard to Mr. Chamberlain's remarks about hæmorrhagic cystitis, that had been due in his experience to retention of urine due to blockage of the urethra with sabulous material. He had seen calculi in the cat, and had seen the whole of the urethra blocked with a gritty material resembling sand and even minute calculi, but that was comparatively rare. In such a case he knew of nothing but flushing out the calculi. He understood from Mr. Chamberlain that a pouch formed containing fæces, and he thought that was due to rupture of the muscular fibres of the sphincter ani, which was common in old cats and dogs. He agreed with Mr. Willett that chloride of zinc was a good caustic, but why use a caustic in eczema? The disease was not more prevalent at the seaside than inland. Professor Macqueen had asked him as to the formation of calculi, but he did not know enough about them to be able to say. He could not say whether they always occurred in the renal pelvis but he surmised that many of them did form there, because he had removed stones from the bladder and ultimately found stones in the kidney some years after. With regard to the use of lithium citrate, he had to use something and he used that, as it had been so highly recommended, but he did not know whether it did any good or not. The specimens of calculi he had shown that evening did not seem to indicate that it was of any use. With regard to the removal of a portion of the tunica vaginalis, the reason he removed it was because it was so widely dilated, and he thought by narrowing it there was a less chance of the bowel coming down again.

As to there being no femoral canal, he stated that there was, both in the dog and in the bitch. Inguinal hernia in the female was the commonest. In the bitch

the femoral hernia came under Poupart's ligament through the femoral sheath, femoral or crural canal, or whatever one liked to term it, but that canal as well as the ring did not exist in any species except as a pathological or artificial condition. The hernia makes the canal and also the ring. With regard to pleurotomy in the cat and dog, the best thing for Prof. Macqueen to do was to try it, and let the Society know the result. He had even opened the chest, pulled out the ribs, and let out the lung, and after returning the lung, stitching of the wound and firmly bandaging the chest, the case had gone on all right. There was a number of theories or fancies in veterinary surgery which, when put to the test, would not hold water. There was a very common hernia in the cat and dog which he forgot to mention in his paper: it was the *sciatic hernia*, which appeared as a soft bulging between the root of the tail and the sciatic ligament, and was raised above the level of the tail, but did not, like perineal hernia, project beyond the anal region. It did not appear to incommode the animal, and it was very common. He thanked the members, and in particular Prof. Macqueen, for the reception they gave his paper, which seemed to interest them very much.

A very hearty vote of thanks was accorded to Mr. Gray for his paper, and also to the exhibitors of morbid specimens, and a vote of thanks to the President for presiding closed the meeting.

HUGH A. MACCORMACK, Hon. Secretary.

The Life-History of Bacteria.

Mr. EDWARD C. HORT, F.R.C.P. Edin., Director of the Constance Trotter Researches, and of the Bacteriological Laboratory, Addington Park, has contributed to *The Brit. Med. Journal* of May 5 a long paper giving details of some of his experiments in this investigation. From it we have taken the following extracts which may furnish an outline of the author's argument and a little of his methods of working. There are six pages of photo reproductions which include 92 micro fields, 4 charts of camera lucida drawings of gemmations (× 3000): and a page of drawings of warm stage culture. The author points out in the concluding two paragraphs that the facts brought out must modify present views on bacteria as causal agents of disease.

"According to current bacteriological theory the 'lower' bacteria, whether living a parasitic or a saprophytic existence, are unicellular organisms which are only capable—apart, in certain cases, from endosporulation of a special type—of reproducing themselves by a simple process of transverse binary fission into two equal parts.

In previous publications on the life-history of bacteria I have brought forward evidence which strongly suggested, if it did no more, that the life-cycle of certain of the 'lower' bacteria is one of great complexity. From this evidence the conclusion was difficult to escape that under parasitic conditions simple binary fission is probably only one of many phases in the bacterial cycle, which includes an invisible, or almost invisible, filterable stage, and that this also applies to laboratory cultures of organisms of certain diseases. In passing, I may note that in my observations in 1914 in typhus fever, and, later, in the same disease,* in cerebro-spinal fever, in scarlet fever, and in measles, as to the existence in the infected body fluids of filterable infective viruses, and of growth from these of non-filterable bacteria, have since been confirmed in the case of laboratory cultures of the azotobacteria by Löhnis in the summer of 1916. This observer, however, has recorded no details of his filtration experiments, and does not state if his cultures were from single colonies, or from single organisms, or if he carried out direct observations of growth from single individuals on the warm stage.

In the present communication I propose to present further pictorial evidence of the complicated life-history of the enteric group of bacteria in so far as this can be studied in laboratory media as opposed to the more natural milieu of infected tissues and body fluids. And to morphological studies of the members of the enteric group I have also added observations on a single strain of a coliform bacillus."

"It is not possible to reproduce here evidence that the morphological results noted in the case of all the strains enumerated above are identical with the results shown in the drawings and photographs of the selected strains. I must be content, therefore, with stating that the essential results were the same in all cases, approximately 1000 films having been examined. The organisms which I have chosen in order to illustrate my points here are the *B. typhosus* of Eberth, the *B. dysenteriae* of Shiga-Kruse, the *B. dysenteriae* Y of Hiss, and a bacillus of the coliform group.

In order to reduce the chances of error to the minimum, I have, in addition to rigid precautions against contamination to be described later, submitted each strain of the organisms of the enteric group to searching identification tests—cultural, biochemical, and serological—both at the beginning, during the course of, and at the end of each set of observations, the additional precaution being taken of frequent replating on MacConkey's medium and on agar, and of repeatedly restarting the whole process of examination by subculture from fresh single non-lactose fermenting colonies on the former medium.

In every case the cultures under examination successfully passed at every stage the necessary standard identification tests, the final agglutination results of the three strains of members of the enteric group selected for demonstration being detailed below.

"It is not claimed that a complete history of bacterial life-cycles can be worked out in acid broth cultures. This can only be obtained by extensive experimental observations, side by side with comprehensive morphological studies of organisms as they occur in the infected tissues and body fluids of subjects of disease. These, in the case of members of the enteric group, have yet to be undertaken.

In all the broth cultures studied reproduction by simple binary fission was still the predominant feature, and in studying the 'aberrant' types of reproduction of single living organisms on the warm stage on solid media, such as gelatin-agar, ordinary binary transverse fission was found eventually to hold the field mainly, though not absolutely, to the exclusion of other types of reproduction. It appears from these observations from single living individuals on the warm stage that reproduction by gemmation occurs freely, in conjunction with ordinary binary fission, only so long as growth proceeds in the thin layer of broth on the coverslip, and largely comes to an end when colonies are beginning to form on the solid medium.

The number of types which can be seen in any acid culture exceeded one hundred. To reproduce a comprehensive picture by photographs alone was therefore impracticable. In consequence it became necessary to make composite drawings with the camera lucida of the chief types observed in one, or at the most two, film preparations from one strain. These drawings represent, in the case of killed organisms, selected individuals

* Studies in Pleomorphism in Typhus and other Diseases, Trans. Roy. Microscop. Soc., *Journ.*, December, 1916.

from a large number of fields, and must therefore not be read as representing average fields.

Once, however, it is grasped that reproduction by gemmation is the key to the 'aberrant' forms shown, and that gemmation may be terminal, median, or superficial, the main types fall into line. That true gemmation occurs of these three types is shown in Chart 9, representing growth from single organisms on the warm stage.

In the warm stage studies the use of oil immersion lenses was found to be essential to detection of minute buds, control observation with 1/6 dry lenses, even with high compensating oculars, often failing to reveal their presence. The presence of these minute forms is probably the explanation of the apparent filterability through Chamberland filters of such relatively large organisms as the *Bacillus bronchisepticus*, and is perhaps responsible for the general view that even well-made Berkefeld filters are not suitable for bacteriological work."

In his "conclusions," the author says:—"It has, of course, long been recognised that changes in the cultural environment of bacteria may sometimes be followed by corresponding morphological adaptations."

He mentions briefly theories which have been put forward in explanation, and rules out cultural contamination, and "involution forms." And of "mutation phenomena" he says:—"The genuine type of pleomorphism exhibited, for example, by the protozoa and the parasitic fungi in the orderly sequence of the manifold cycles of their complex life-histories, would equally apply to the bacteria, once it was proved that they too can reproduce themselves in other ways than by simple transverse binary fission into equal parts."

"Finally, it is often assumed that because bacteria appear to breed true to type—that is, to laboratory type—in standardized laboratory cultures, simple transverse binary fission is the sole method of reproduction under natural saprophytic and parasitic conditions which are not, and never can be, standardized. As, however, I have shown, evidence of complex bacterial life-cyles is constantly before us even in ordinary standardized laboratory media, though it may, and often does, require persistent looking for.

The truth, in fact, appears to be that we have gone astray in this matter because we have in the past invoked too easily the theories of contamination, of involution forms, and of mutation, and have forgotten that the normal habitat of bacteria, both as saprophytes and as agents of disease, is under perpetual assault, leading to endless instability of environment.

From these morphological observations it is clear that bacteria can, and do, reproduce themselves in other ways than by simple binary fission, and that the life-cycle in some cases includes an invisible or almost invisible phase. Our present conception, therefore, of the rôle played by bacteria, both as saprophytes and as causal agents of disease and its sequels, will have to be profoundly modified."

ARMY VETERINARY SERVICE

Mentioned in Despatches.

Maj. W. Jowett, A.D.V.S., 1st East African Division.

[We regret that in our issue of Feb. 10, quoting from the despatch of Lt.-Gen. Smuts from G.H.Q. East Africa Force, Nov. 22, 1916, the foregoing intimation was omitted. Maj. Jowett's name appeared as S.A. Def. Force, under the general heading of "Staff," and we were unable at the time to confirm it as S.A.V.C.]

French Honours.

May 21.

The following are among the Decorations presented by the President of the French Republic for distinguished services rendered during the course of the campaign. The King has given unrestricted permission in all cases to wear the Decorations in question:—

Croix de Guerre—Maj. E. P. Argyle, A.V.C.

Extracts from *London Gazette*,

War Office, Whitehall, May 17.

Regular Forces. Army Veterinary Corps.

Temp. Capt. G. W. Dunkin to be actg Major while comdg. a Vety. Hospital (Apl. 11).

May 18.

Temp. Lts. to be temp. Capts.:—H. McC. Nedeau (Mar. 28); J. A. Shannon (Apl. 18); J. McR. Frost (Apl. 22); B. A. McGuire (May 1).

To be temp. Lieuts.:—W. Austin (Apl. 30); T. J. Bosworth (May 1).

May 19.

Maj. (temp. Lt.-Col.) R. L. Cranford, F.R.C.V.S., to be Lt.-Col. (July 26, 1916).

To be Temp. Lieuts.:—H. W. A. Zealand, J. F. Lavery, J. N. Ellah, W. G. Bentham, H. J. Watt, H. L. Forbes, H. L. Caldwell, M. I. Farrell, J. S. Kelleher.

May 21.

Capt. to be actg. Major:—E. G. Turner (Dec. 23, 1916).

Territorial Force, Army Veterinary Corps.

May 17.

Capt. J. R. Welsby relinquishes his commn. (May 18).

It is now officially confirmed that Capt. D. Pollock, M.R.C.V.S., A.V.C., previously reported missing, has been drowned at sea. The younger son of Mr. James Pollock, V.S., Hamilton, Capt. Pollock joined the Army in Feb., 1915, immediately after qualifying at the Glasgow Veterinary College as a practising veterinary surgeon. He leaves a widow and young son.

The following casualty is reported:—

Died—Pte. (actg. Sgt.) W. Welfare, 02485 (Stoke).

The A.V.C. Comforts Fund.

Dear Sir,—I have pleasure in forwarding further lists of parcels and subscriptions received for the A.V.C. Comforts Fund for favour of publication in this week's issue of *The Veterinary Record*. May I add that the presence of subscribers is invited to the Annual Meeting to be held, by kind permission of the Council R.C.V.S., at 10 Red Lion Square, London, W.C., on Wednesday, June 6th, at 3 p.m., when I hope to give an account of the year's work.—Yours truly,

Adelaide M. Moore.

20 Parsifal Road, Hampstead, N.W. 6.
May 23rd.

Subscriptions received since list published March 17.

Mr. W. Jackson Young, Edinburgh	£1	0	0
Lt.-Col. A. W. Mason, A.V.C.	1	1	0
Mr. Peter Wilson, Lanark	1	1	0
Mr. R. A. Philp, Brentwood	1	1	0
Mrs. Heelis	1	1	0
Mrs. J. W. Rider	1	1	0
Mr. T. Salusbury Price	3	3	0

Capt. S. C. Rowbotham, A.V.C.		1	0	0
Mr. J. J. Townsend, Cambridge		1	1	0
Mr. J. Temple, Aberdare		2	2	0
Maj. J. Wakefield Rainey, A.V.C.		1	1	0
Mr. W. P. Forsyth, Cannock, Staffs.		1	1	0
Mr. Alfred Over, Rugby		2	2	0
per Maj. E. B. Bartlett: contribution from No. 10 Veterinary Hospital		4	0	0
per Maj. H. Gamble: contribution from No. 1 Veterinary Hospital		10	0	0
per Maj. R. Porteous, A.V.C.: Convalescent Horse Depot		3	3	6
per Maj. Logan: part proceeds entertainment, Divisional Vety. Hospital, St. Albans		3	3	0
Mrs. Pawlett			10	6
Mr. A. A. Martin		1	0	0
Maj. H. G. Allen, A.V.C., India		2	0	0
Capt. J. J. Mills				
per Mrs. Alison Brown: from Lady Fowler			10	0
per Rev. H. Hayward, C.F.: proceeds entertainment by "Somme Black Cats"		20	0	0
Midland Counties Veterinary Association, per Mr. J. J. Burchnall, Hon. Treas.		5	0	0
Collected by Masters C. W. and A. Emery, and George and Hugo Elliott: from Belfast friends of the A.V.C.		15	6	0
per Mrs. Mosley:				
J. Straker, Esq.	£1 1 0			
Edward Joicey, Esq.	1 0 0			
The Hon. Lady Parsons	5 0 0			
Mrs. Noel Villiers	10 0			
The Misses Dixon-Brown	1 0 0			
		8	11	0
per Col. F. C. Stratton, Edinburgh (as collected: list of subscribers will be published later).		21	0	0

Parcels containing Socks, shirts, mufflers, mittens, etc., received since March 17th.

From Mrs. Garnett (Fund wool), Mrs. Jessie Thorn, Mrs. McIntyre (Fund wool); per Mrs. Quinlan (Fund wool): Mrs. Fearnside, The Hon. Bridget Douglas Home; Mrs. Kirby (Fund wool), Mrs. Awde, Mrs. Moscrop, Mrs. O'Rorke, Mrs. Hunt; per Miss R. G. Robinson, President, Birdwell Patriotic Working Party, Barnsley; Mrs. Alison Brown, Mrs. Clayton (Fund wool), Mrs. Frante Thornton; per Mrs. Garnett: Mrs. Nurse's Ladies' Working Party, Windermere; per Mrs Quinlan: The St. Albans War Work Party, Streatham; per Mrs. Howorth: The Bowden Wesleyan Red Cross Sewing Meeting; per Mrs. Blue, President: May Street Church Working Party, Belfast; Mrs. Rutherford, Mrs. Moscrop.

SUBSCRIPTIONS TO R.C.V.S.

The following list should have appeared in our issue of the 12th inst., but was by some means lost in transmission:—

P. Carter, Capt. A.V.C.	£1	1	0
W. Fawdington, York	1	1	0
A. S. Ferguson, Capt. A.V.C.	1	1	0
W. Grey, Ilford	1	1	0
H. H. Hide, Edmonton	1	1	0
S. E. Holmes, Capt. A.V.C.	1	1	0
G. E. King, Abingdon	1	1	0
O. A. McDowell, Gloucester	1	1	0
F. B. Reynolds, Capt. A.V.C.	1	1	0
A. E. Willett, Capt. A.V.C.	1	1	0
F. W. Willett, Staines	1	1	0
Amount acknowledged on May 5	520	14	0
Carried forward to May 19	532	5	0
J. G. Cattell, Karachi, India	£1	1	0
W. A. Hancock, Uxbridge, Middx.	1	1	0
H. D. Jones, Peckham, S.E.	1	1	0
J. S. Keane, Lieut. A.V.C.	1	1	0
A. D. Lalor, Sleaford, Lincs.	1	1	0
H. Morphew, Epsom, Surrey	1	1	0
E. F. Wood, Hooton, nr. Chester	1	1	0
Acknowledged May 19	543	16	0
	£551	13	0

Personal.

DIBBEN—McIVER. On the 17th May, at St. Mary's, Kensington, W., Maj. H. C. Dibben, A.V.C., to Margery, second daughter of Mr. and Mrs. J. A. McIver. Indian papers please copy.

OBITUARY.

W. F. SHORE, M.R.C.V.S., Maj. A.V.C.
Graduated, N. Edin: May, 1889.

Major Shore died in India, on December 6, 1916.

POOLE.—Killed in action on 3rd May, Capt. B. R Poole, of the Canadian V.C., youngest son of Surgeon-major and Mrs. Poole, of Norwood.

TREATMENT OF EVERSION.

Sir—This season so far has presented a high percentage of foaling and calving cases, as well as a few cases of eversion of the uterus in both cows and mares. In former years my success in the after treatment of such cases has not given the satisfaction aimed at.

The usual in such cases was the administration of antiseptics orally, and the injection of antiseptics two or three times a day. Post mortem, in a good few cases, resulted in finding the uterus filled with the injected solution and dead matter from parts of the placenta which could not be removed, as well as other matter from the walls of the uterus. In fact, I now consider that if we want general septic poisoning we adopt very good measures to accomplish it.

In saying this much I may lay myself open to severe criticism, but that is what I wish to provoke, with a view to get practical suggestions on other methods of treatment.

This season I have adopted the following treatment and, so far, have had no reason to regret the change.

In the case of a mare with everted uterus, the everted portion is placed on or in a clean bed-sheet which has been steeped in warm lysol solution of usual strength, the placenta is carefully removed, if much bleeding takes place have an assistant pouring cold antiseptic solution on your hands while at work. Return the organ in the usual way—I am at present testing an instrument which assists greatly in this operation, and will place it before the profession when it evolves from the elementary stage—then have the bed-sheet well swilled in warm antiseptic solution, and pack the whole well into the uterus; the idea being to replace it in as near the natural position as possible. Leave the sheet in for three or four minutes. On its removal take a large sponge which has been in *hot* antiseptic solution, squeeze it dry, pass it into the uterus and swab up the fluid therein. In fact, dry the inside of the uterus as far as possible with the sponge. Then with a 4-oz. syringe with a long nozzle, inject 3 oz. peroxide of hydrogen, and place clamp in position.

On the following day, repeat swabbing and H_2O_2 solution. In mares and cows from which the placenta has been mechanically removed, use the swabbing and H_2O_2 solution at intervals of eight or ten hours.

I think that inflating the uterus with pure oxygen might be useful, but I have not tried this.

As the foaling and calving season is now in full progress, there will be plenty of opportunities for trying the foregoing method; which up to the present has given me very encouraging results.

I lay no claim to literary merit, so please pardon me for putting these few crude notes before you.

Kirkby Stephen. R. M. MALLOCH, M.R.C.V.S.

TEXT-BOOKS.

Sir,—Your correspondent "Papyrus" dissents from my proposal that the Council of the R.C.V.S. should give financial assistance to first-class men for the production of necessary books of a like standard; but he gives no reason for objecting to the Council acting in this capacity. He advances two alternative suggestions; but here again he gives no reasons in support of either. One of them is impossible at present; and I cannot see how the other could be worked satisfactorily.

I suggested the Council for this purpose for two chief reasons. First, when the Bill passes, the Council will be able to spare the money. Second, the Council certainly ought always to be, and I believe now is, the best veterinary body in the Kingdom to decide what books are most needed, and to choose the men most capable of writing them. Bearing these points in mind, let us consider your correspondent's suggestions.

His first alternative is "to get the National Veterinary Association to guarantee a fee to the writers." I reply that the National Association is in no position to do anything of the sort, and is not likely to be for a long time. At present the Association is paying its way; and only a considerable accession of new members—which does not appear probable—will enable it to do much more. I do not dwell upon the question of whether the National Association is as fit for the task of selection as the R.C.V.S. Council. Personally, I do not think it is; but it will be time enough to discuss that point when "The National" is in a position to find the funds.

His second alternative is "for the majority of the profession to subscribe in advance for copies of the work." Well, in the first place, I doubt whether *the majority* of the profession could ever be induced to subscribe to a high-class and costly work upon any subject. Leaving that point; how would such a scheme be worked? Would the profession be asked to subscribe for a book before it was written, or would the author have to write it beforehand on the chance of obtaining subscriptions? And there are other pertinent questions. How and by whom would the subjects of the works be selected, and how would it be possible either to choose the right authors or to guarantee their fitting remuneration?

Under my plan, all these points would be entrusted to the Parliament of the profession; but I cannot see that your correspondent's suggestion provides for any one of them. And, unless they are *all* adequately provided for, I am afraid our supply of really first-rate books is likely to remain very unsatisfactory.—Yours truly,

"TWENTY YEARS QUALIFIED."

THE SALARY OF A BACTERIOLOGIST.

Sir,—In *The Veterinary Record* of May 12th an advertisment appears calling for applicants for the post of Bacteriologist for the Glasgow Veterinary College. The applicant is required to devote the whole of his time to research work into Braxy, Louping Ill, and other sheep diseases, and to taking classes at the College. For all this the magnificent salary of a sum "not to exceed £260 per annum" is offered. What kind of a bacteriologist does the Glasgow Veterinary College expect to obtain? Any bacteriologist who has had any training in research work can command a salary three times as large as this in any of our colonies.

There is a shortage of veterinary surgeons, and can this be wondered at; for what parent, searching for a profession into which to put his son, would not hesitate to select veterinary science if he saw this advertisement?

I consider that to offer such a miserable salary for such highly specialised work is a disgrace; and that the R.C.V.S. ought to step in and demand that adequate remuneration be offered to a teacher in bacteriology at this college. The best men will not look twice at this advertisement. What kind of a lecturer will be obtained for this salary; and what kind of teaching will the students get? I enclose my card.

"BAWBEE."

Johne's Disease.

Mr. J. Malcolm, F.R.C.V.S., veterinary surgeon to the Birmingham Corporation, recently addressed the Worcestershire Chamber of Agriculture on the subject of "Johne's Disease." The symptoms in the advanced cases, he said, presented no difficulty. In the early stages they were much less definite. The loss of condition might be only very slight, the diminution in the milk yield might not be great, the unthrifty appearance and tightening of the skin, the tucking-up of the belly and the irregularity of the bowels might not be very marked; yet, taken collectively, they indicated a non-thriving condition which, in the absence of any other manifest cause such as tuberculosis or worms, must be regarded as suspicious. Johne's disease and tuberculosis were rarely found in the same animal. As evidence of the wide distribution of the disease he said that at the central abattoir in Birmingham they had as much beef condemned in consequence of cattle being infected with Johne's disease as with tuberculosis. In the early stages, if the animal was killed the carcase was readily passed by the inspector for human food, but in the later stages it was as certainly condemned. With proper precautions he saw no reason why the disease should not be materially lessened, if not eradicated.

Sheep Dipping and Scab.

"Strathspey Shepherd," writing to *The Scottish Farmer*, says:—"During the existing compulsory period from 15th July to 31st August no satisfactory dipping can be done in a high-lying district, owing to sheep scattering so much, leaving hundreds undipped for a whole year and over. Let sheep farmers see to it that compulsory dipping is done in spring, sheep are then easily gathered. If this were done, I am certain the number of scab reports would be greatly diminished.

About a fortnight ago I had the opportunity of seeing a lot of sheep being taken home from wintering. They were dipped in November last, and knowing their summer grazing, and the difficult nature of the ground to gather, a big percentage of this lot will not be dipped till next November. This is only one instance, when many could be quoted. No wonder scab is common. In my opinion, under the existing dipping regulations, it will rapidly increase."

Vegetable Ivory as a Cattle Food.

The United States imports annually from tropical America about 10,000 tons of vegetable ivory nuts, costing 1,500,000 dols., for use principally in the manufacture of buttons. In foreign countries the waste—sawdust, chips, and turnings, has been mixed with other ingredients to be used as a cattle food, and it is said that in Germany this meal has been used as an adulterant of so-called concentrated feeds. Messrs. Beals and Lindsay, of the Massachusetts Agricultural Experiment Station, have made an extensive investigation of its chemical composition, digestibility, and feeding value. They find that the energy equivalent of this material ranks well with other carbohydrate foods. Sheep ate the meal readily when it was mixed with other grains and digested it thoroughly. Cows ate it when mixed with other feed, without evidence of digestive disturbances. When fed as an addition to a basal ration, the increase in milk was sufficient to indicate positive value as a productive feed.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.	Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
	Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
Gr. BRITAIN. Week ended May 19	6	7					47	71	6	66	24
Corresponding week in 1916 ...	14	15					44	68	1	140	438
Corresponding week in 1915 ...	12	13					29	52	3	107	392
Corresponding week in 1914 ...	12	14			4	5	37	59	2	146	1546
Total for 20 weeks, 1917	259	266			11	21	1337	2765	364	1053	444
Corresponding period in 1916 ...	265	309	1	24	21	62	1300	3040	170	1924	6070
Corresponding period in 1915 ...	312	347			12	17	282	653	151	1597	6947
Corresponding period in 1914 ...	368	394	11	74	39	86	1210	2170	142	1526	15640

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.
(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked :—
Board of Agriculture and Fisheries, May 22, 1917. Excluding outbreaks in army horses.

The use of Tuberculous Beef.

At a meeting of Paisley Town Council—Provost Robertson presiding—a report was submitted by the Public Health Committee with reference to an interview they had with Major Leighton, M.D., Veterinary Inspector of the Local Government Board, in connection with the necessity for utilising all meat as far as possible. The Local Government Board considered that those portions of a carcase partially affected with general tuberculosis might be used for food if sterilised. This applies to portions not visibly affected. In no case, Major Leighton had explained, would it be proposed to subject to sterilisation any portion of meat visibly affected, and the question put before the Committee was :—"Would they support the sale of the meat of cattle affected with general tuberculosis so far as concerns the portions not visibly affected, if sterilised?" Dundee, Aberdeen, and Hamilton, he informed them, were doing this, and other burghs were favourably considering the proposed procedure. The quantity available for treatment in Paisley was 47 cwt. per annum. At a subsequent meeting of the committee consideration was given to Major Leighton's suggestion. Motions in favour of it and against it were moved, but ultimately, on the motion of Bailie Menzies, the matter was delayed for a month.

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